

REMARKS

Claims 1-22 are pending in the application. Claims 1, 2, 5, 9, 17, 19 and 20 have been amended. Claims 11, 12, 20 and 22 have been objected to for depending upon a rejected base claim, but are indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, with this Amendment, new claims 23 and 24 are presented which are a combination of claims 1, 9, 10 and 11, and claims 1, 9 and 12, respectively. An indication of allowance regarding claims 20, 23 and 24 is earnestly solicited.

Claim 1 has been further amended to define that the entire length of the lateral wall has a linear vertical cross section. The claimed feature is clearly shown in FIGS. 2a and 2b, wherein lateral wall 16 is shown in a vertical cross sectional view as being linear along its length. Claim 1 further defines that the upper wall section is connected to and extends upward from the common wall section. The claimed feature is also clearly shown in the drawings wherein upper lateral wall 17 is shown connected to common wall section 18. Accordingly, no new matter has been added.

Claim 2 has been further amended to define that the lateral wall is a linear tangent line connected with the curved edge section tangentially. According to the known definition of "tangential", geometrically, a linear surface or line is also tangent to a curve at some point, if both the line and the curve pass through the pass point with the same direction. Accordingly, in order to be connected with a curved edge section tangentially, the lateral wall must be a linear tangent line when considered as a vertical cross section, such as shown in FIG. 2a.

New claims 25 and 26 have been added and are in combination respectively of claims 1 and 2, and claims 1 and 5. Accordingly, no new matter has been added.

Claim 19 has been amended to depend on claim 8. Accordingly, claim 19 is not a substantial duplicate of claim 9.

Claim 5 was objected to by the Examiner who stated that the term "whereby S indicates" should read "wherein S indicates." The appropriate correction has been made in claim 5 and the same correction also made in claim 17.

Claims 1-8 and 13-18 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Schlensker et al. WO 02/38247 (U.S. Patent No. 6,936,084 as English

translation). The Examiner states that Schlensker teaches a strip-shaped lateral wall having a linear vertical cross section and the lateral wall has an upper wall section which extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto, (Fig. 1).

It is respectfully submitted that the Schlensker reference cannot anticipate, nor render obvious independent claim 1. Claim 1 states that the lid includes a strip-shaped lateral wall having a linear vertical cross section along the entire length of the lateral wall. The limitation clearly indicates that the entire length of the lateral wall has a linear vertical cross section as illustrated, for example, in FIG. 2a which includes lateral wall 16. Schlensker's Fig. 1, see Exhibit A, includes a lateral wall 24, adjacent container peripheral wall 20, clearly does not have a linear vertical cross section along the entire length of the lateral wall. Schlensker teaches a stepped upper wall section shown in the bottom portion of Fig. 1 as well as an angled portion present in the common wall section located upwardly of the upper wall section shown in Fig. 1.

Claim 1 further states that the lateral wall upper wall section, see 17 in Fig. 2a, is connected to and extends upward from the common wall section 18 that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto. The Schlensker upper wall section connected to and extending upwardly from the common wall section clearly includes on its interior surface a stepped section which provides the upper wall section with a stepped appearance. Accordingly, the Schlensker upper wall section cannot be parallel to the common wall section lower end and is further not parallel to the cartridge container peripheral wall adjacent thereto.

It is respectfully submitted that the scope and content of the Schlensker reference cannot anticipate, nor render obvious at least Applicants' noted claim limitations set forth in independent claim 1.

Regarding claim 2, as described previously a tangent, geometrically, a linear surface or line is tangent to a curve at some time, if both the line and the curve pass through the same point with the same direction. Accordingly, Applicants have further defined that according to the vertical cross section shown for example in the drawings, the lateral wall is a linear tangent line and the lateral wall is connected with the curved end section tangentially. Also regarding claim 2, the Examiner states in the Response

to Argument section of the Office Action that the curved edge section curves completely at 90 degrees before it connects with the lateral wall section and therefore it is connected tangentially as shown in Fig. 1. It is respectfully submitted that this is incorrect. According to the definition of a tangent and the limitations set forth in claim 2, the lateral wall of Schlensker is not, in vertical cross section, a linear tangent line. As indicated with respect to claim 1, at least the upper wall section of Schlensker includes a stepped segment. The overall lateral wall of Schlensker on its outer surface also includes a curved segment. The Schlensker lateral wall and curved edge section actually meet in the shape of a "V" which is not tangentially connected as claimed. Applicants' claimed linear lateral wall connecting with the curved edge section tangentially cannot be anticipated, nor rendered obvious by Schlensker. Likewise, new independent claim 25 cannot be anticipated, nor taught or suggested by Schlensker.

Claim 5 and independent claim 26 claim that the curved edge section has the mean edge radius of curvature R , which satisfies the equation R greater than or equal to 5 times S , wherein S indicates the thickness of a peripheral wall of the cartridge container. The Examiner states that Schlensker does not teach the claimed dimensional relationship of the curve of radius and, therefore, rejects claim 5 under 35 U.S.C. § 103(a) as being obvious. It is respectfully submitted that the Examiner's reliance on Gardner is misplaced. The Examiner's quote states that "where the only difference between the prior art and the claims was a recitation of relative dimensions... the claimed device was not patentably distinct from the prior art device". As indicated above with respect to claim 1, Schlensker cannot anticipate at least the two mentioned additional limitations present within independent claim 1 upon which claim 5 depends, and present in independent claim 25. Nor does Schlensker present any relative dimensions regarding the radius of curvature of his lid. As reiterated by the Supreme Court in KSR International Co. v. Teleflex Inc., 550 U.S.____ (2007), the basic inquiries regarding the question of obviousness set forth in Graham v. John Deere Co. of Kansas City, 383 U.S. 1 (1966), are determining the scope and content of the prior art, ascertaining the differences between the claimed invention and the prior art, and resolving the level of ordinary skill in the pertinent art. By the Examiner's characterization of Schlensker, it is clear that there is no recognition of the importance

of the radius of curvature in comparison to the curved peripheral wall thickness within the scope and content of the Schlensker reference. As claimed in claim 5 and independent claim 26, Applicants' claimed curved edge section has a radius of curvature R which satisfies the equation R greater than or equal to 5 times S , wherein S is the thickness of the peripheral wall of the cartridge container.

Considering Schlensker, please see the enlarged, partial marked-up copy of Fig. 1 of Schlensker labeled as Exhibit B. The radius of curvature R of the curved edge section is about 0.75 cm. S , the thickness of the peripheral wall of the cartridge container is about 0.45 cm at a minimum. According to Applicants' claimed relationship, the Schlensker radius of curvature R , 0.75, is not greater than or equal to 5 times S , which equals 2.25. It is unclear from the teachings of the Schlensker reference how a person of ordinary skill would have understood the prior art teachings or what a person of ordinary skill would have known or could have done in view of the teachings of the Schlensker reference to arrive at Applicants' claimed limitation regarding the radius of curvature.

As indicated on page 5 of the present application, it was also found that the greater the radius of curvature of the curved edge section, more favorable is the force distribution, whereby the upper limit is given by the dimensions of the cartridge container. Thus, having a greater radius of curvature, which cannot be taught or suggested by Schlensker, allows the forces acting on the lid due to the internal pressure cannot only be weakened in the edge area, but can be used for generating a sealing force whereby due to the radius of curvature, the common wall section is pressed against the peripheral wall of the cartridge container, see page 4, third full paragraph. It is respectfully submitted that the gap between the prior art and the claimed invention is so great as to render the claim non-obvious to one reasonably skilled in the art.

Claims 13 and 14 have been rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a), as being obvious over Schlensker '247. The Examiner states Schlensker teaches at least one section of the common wall section is joined with the peripheral wall.

Considering the scope and content of the Schlensker reference, there is no anticipation, nor scope and content for utilizing a weld between the common wall

section and the peripheral wall, nor glue or a butt weld between the common wall and the peripheral wall.

Claims 9, 10, 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlensker '247 in view of Stifano (U.S. Patent No. 4,109,820). Claim 15 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlensker '247 in view of Gizowski et al. (U.S. Publication No. 2001/0000894).

Regarding claims 9 and 19, the Examiner states that Stifano teaches a lid further comprising a back-up ring arranged on the lid, the back-up ring has an inner wall comprising a ring opening (25), an outer lateral wall in contact with the lid lateral wall and a plurality of radial reinforcing ribs (14) extending between the back-up ring inner wall and the back-up ring outer lateral wall (Fig. 5). The Examiner further states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the back-up ring of Stifano because the ring redirects the pressure within the container to the walls and makes a stronger seal, see Col. 3, lines 46-56.

It is respectfully submitted that one of ordinary skill in the art would not be led to combine the Schlensker reference with Stifano. It is incorrect that the Examiner states Stifano teaches a lid further comprising a back-up ring arranged on the lid. Stifano only teaches a single lid and not a back-up ring arranged on a lid as claimed! Stifano teaches a lid or closure insert 10 comprising an inverted annular flange 13 and a plurality of support members 14 underlying annular flange 13 and all but the central portion of the face, see Col. 2, line 50 through Col. 3, line 2. It is further defined in Col. 3, lines 29-33, the plurality of support members 14 are preferably integrally formed with the face and flange. Accordingly, Stifano cannot anticipate, nor teach or suggest Applicants' claimed back-up ring arranged on the lid as claimed in dependent claim 9. Furthermore, Applicants' back-up ring, which is separate and distinct from the claimed lid, is claimed to have an inner wall comprising a ring opening and an outer lateral wall in contact with the lid lateral wall. Neither Schlensker nor Stifano teach any such structure. Moreover, dependent claim 9 claims that the plurality of radial reinforcing ribs are connected to and extend between the back-up ring inner wall and the back-up ring outer lateral wall. As illustrated in Fig. 4 and especially Fig. 5, the Stifano reinforcing ribs do not connect to and extend between both the back-up ring inner wall and back-up

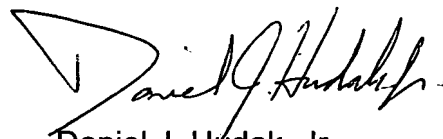
ring outer wall, but instead extend from the Stifano lid outer wall 22 and end on the underside 21 of the lid, and do not at all contact the ring opening 25. It is respectfully submitted that one of ordinary skill in the art would not arrive at Applicants' invention even if in possession of the Schlensker and Stifano references.

As indicated on page 6, second full paragraph, Applicants' claimed back-up ring is reusable, but the lid as well as the filter cartridge must be disposed of later as waste and the costs for the lid material can thus be saved. One of ordinary skill in the art does not learn such a teaching from the combination of Stifano and Schlensker.

It is respectfully submitted that the claims are in condition for allowance and a Notice of such is earnestly solicited. Should the Examiner have any questions or concerns regarding this response, a telephone call to the undersigned is greatly appreciated in order to expedite allowance of the application.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Daniel J. Hudak, Jr.", with a stylized, cursive script.

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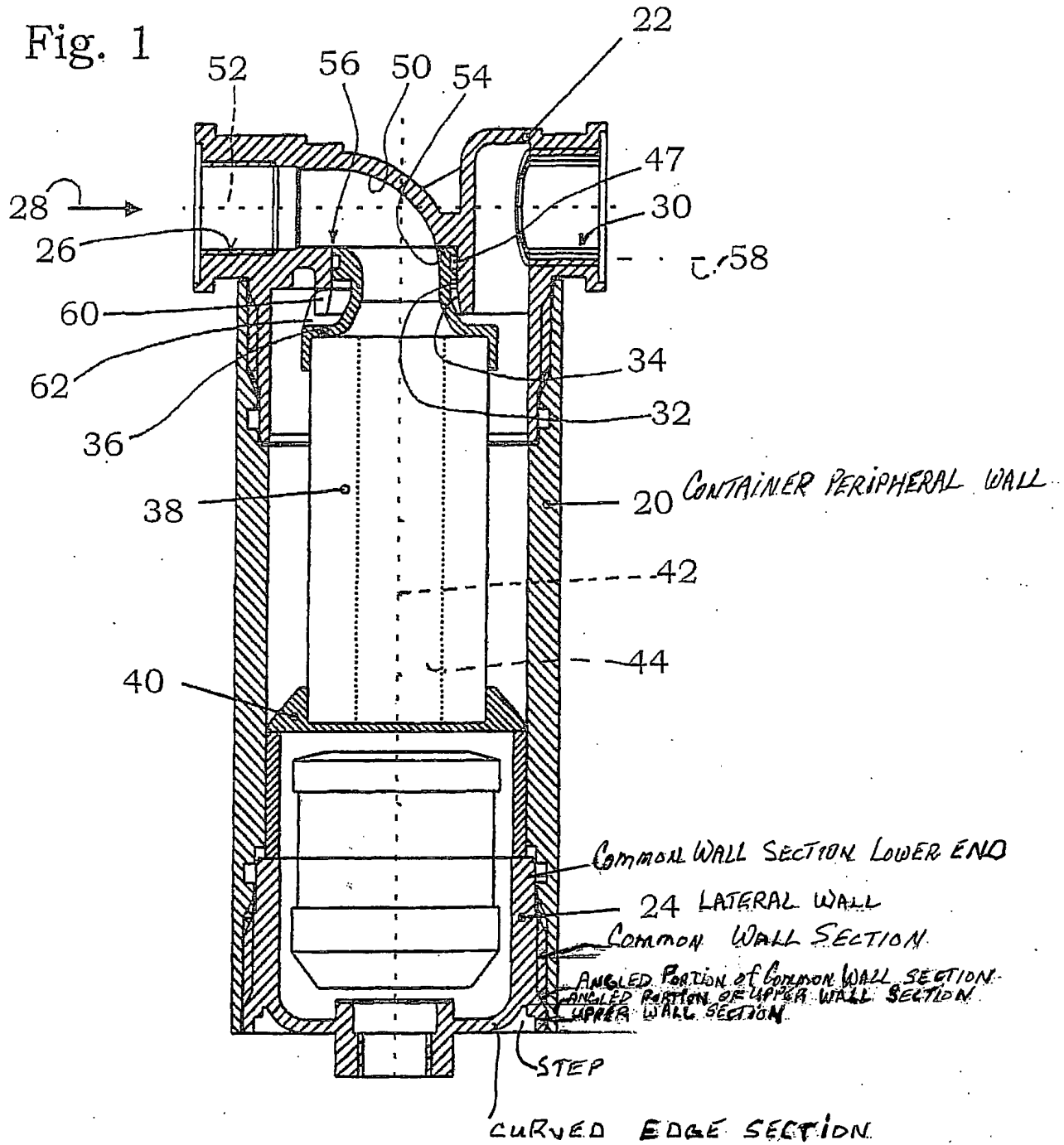


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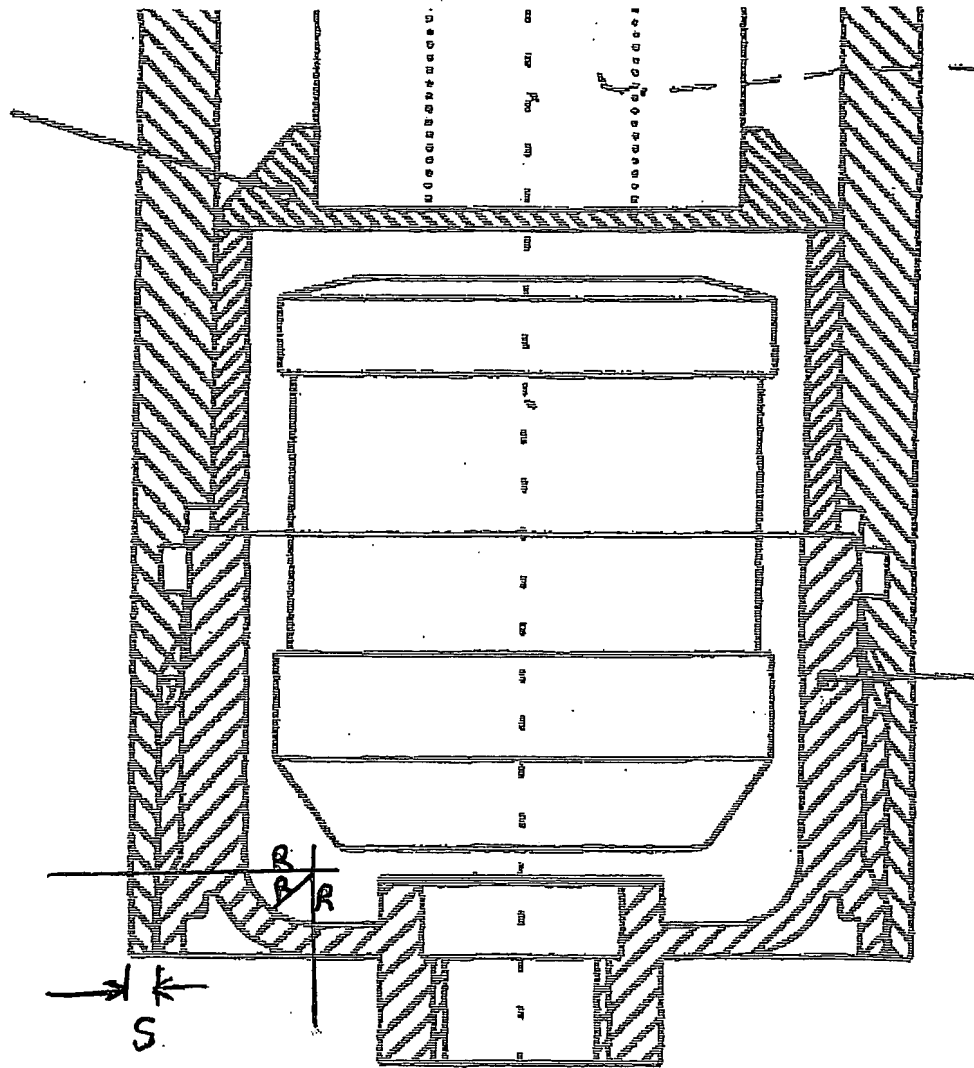
1/4

EXHIBIT "A"



40

EXHIBIT "B"



$$R = .75 \text{ cm}$$

$$S = .45 \text{ cm at a minimum}$$

$$R \geq 5 \times S$$

$$.75 \geq 2.25 !$$